

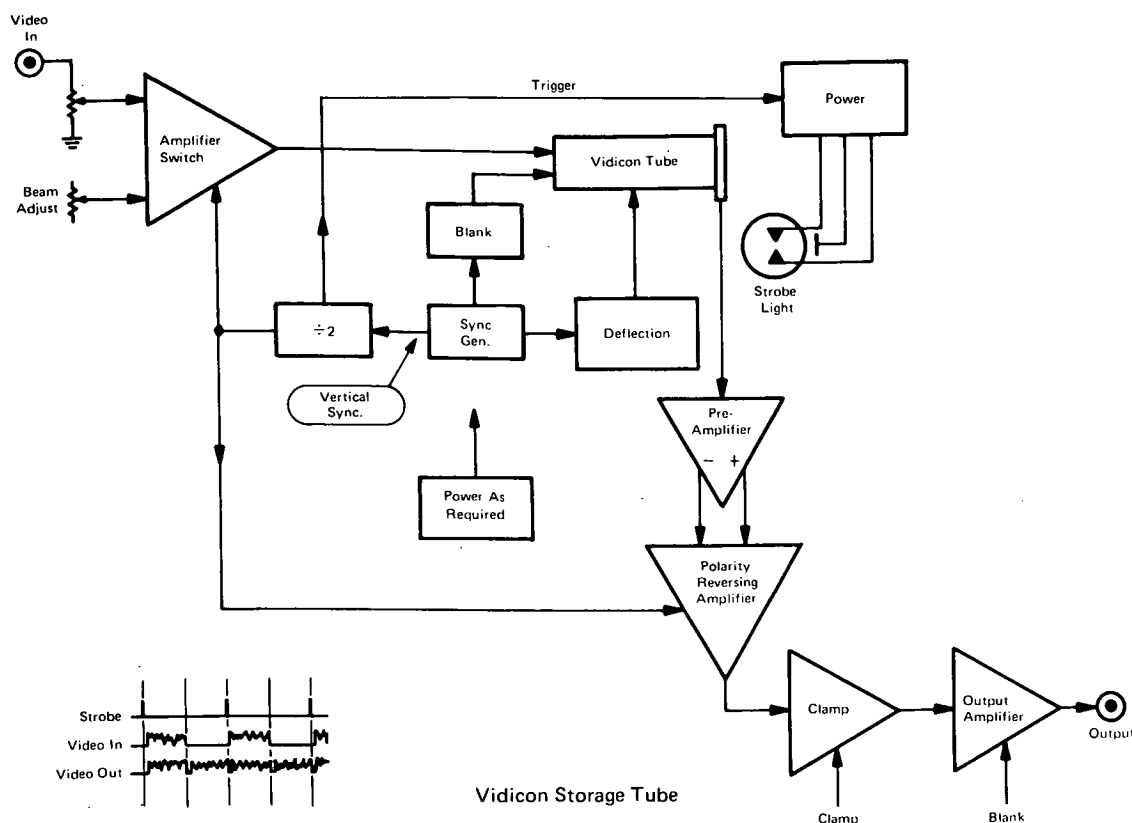
NASA TECH BRIEF

Manned Spacecraft Center



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Vidicon Storage Tube Electrical Input/Output



An electrical data storage tube can be assembled from a standard vidicon tube using conventional amplification and control circuits. The vidicon storage tube is simple and inexpensive and has an erase and preparation time of less than 5 microseconds.

A conventional television camera is modified by removing the lens and adding (1) a synchronous strobe lamp, (2) an amplifier switch for modulating the tube during the input mode, (3) a polarity reversing amplifier to change the polarity signal when switching from input to output, and (4) a binary divide-by-two module for controlling the sequence. This system (shown in the

diagram) is capable of short-term storage of analog television signals, FM modulated carrier, or any form of digital data.

Normal scanning of the tube is required during the electrical input/output mode of operation. The flash of the strobe light charges the tube during vertical blanking. The input signal (information being stored) modulates the electron beam which proportionately discharges certain areas of the target. The storage cycle is complete when the entire target is scanned with a continuous beam current producing an output signal inversely proportional to that stored. The target is strobed to erase

the previously stored information and the sequence repeated.

This technique may be useful for television scan conversion, data time-base conversion, serial-to-parallel color television conversion, and various types of digital memories.

Note:

No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Code JM7
Houston, Texas 77058
Reference: B72-10285

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to:

Patent Counsel
Code AM
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Houston, Texas 77058

Source: P. Lipoma of
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